



# Bedfordshire Local Representatives Group

Meeting #8

07 February 2023

# Housekeeping

## Thank you for joining

This is a virtual meeting.

Please display your full name as when you registered to attend – this can be done through the ‘Participants’ section.

To help everyone feel part of the discussion, please feel free to turn your camera on during the meeting if you can.

Please use the ‘Raise Hand’ function to raise a question during the meeting, found in the bottom ribbon (under the ‘Reactions’ option).



**Display your full name in username**



**Please use the mute function**



**Use the ‘Raise Hand’ function if you want to raise a point during the meeting**



**Please do put your camera on if possible**

# 0.1 Today's agenda

**01.**  
Today's agenda

---

**02.**  
Review of actions from previous meetings

---

**03.**  
Topic – Traction strategy

---

**04.**  
Topic - Freight

---

**05.**  
Future topics

---

**06.**  
AOB and closing remarks

## 02. Review of actions from previous meetings

# Closed actions

Meeting	No.	Action	Owner	Status
#6	4.	To review whether the meeting should be fully virtual or in person rather than a 'hybrid' meeting.	EWR Co	Group agreed polls would continue for choosing how they would like to attend each meeting.
#6	5.	To look into audio technical difficulties and resolve prior to next meeting.	EWR Co	Meeting equipment reviewed, will be revisited in advance of next in-person meeting.
#7	1.	EWR Co to recirculate the form on the format of meetings to LRG members. Group members to complete the form in advance of the new year if they wish.	EWR Co	Complete, form recirculated no further responses provided. As noted above, Group agreed polls would continue for choosing how they would like to attend.
#7	3.	EWR Co to reshare the link to more information on the Accessibility Advisory Panel and a copy of poster with Group members.	EWR Co	Complete.

# Outstanding actions

Meeting	No.	Action	Owner	Status
#7	2.	EWR Co to share some examples of what has been delivered under the banner of active travel within CS1 and to outline the difference between funding and supporting local authorities to achieve these aims when these are available.	EWR Co	EWR Co will provide once available.

# 03. Traction strategy

Mark Foster, Operations Executive – Rolling stock

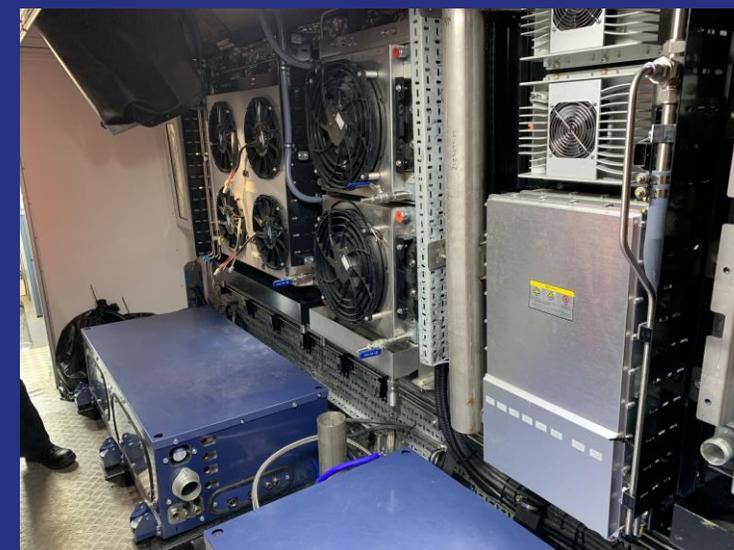
# EWR Initial Fleet

- Modern two-carriage diesel trains;
- Operate the initial Oxford to Bletchley with potential to extend to Milton Keynes Central service temporarily;
- Engines meet EU Stage IIIB emissions standards and use Ad Blue in the exhaust system to reduce nitrogen oxide (NOx) emissions;
- Each train has an accessible toilet, passenger information throughout, and dedicated spaces for three bikes.



# Use of different types of traction

- Initial use of diesel only trains is a temporary solution;
- This allows EWR to commence services quicker, unlocking the benefits of the new railway earlier;
- Electrification remains under consideration with EWR Co awaiting a decision from government on this;
- This allows flexibility in future power options in line with the government commitment to removing all diesel only trains by 2040;
- EWR are also investigating alternative traction power including battery power and hydrogen fuel cells.



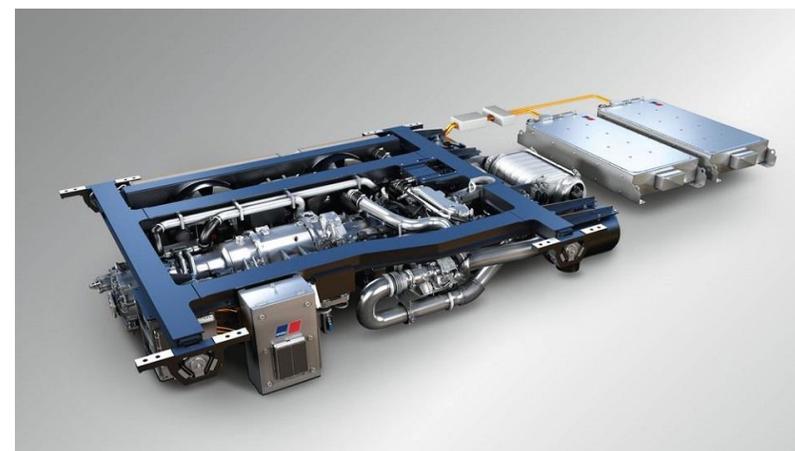
# Long-Term Rolling Stock Options

Traction Type		Carbon	Cost	Complexity
EMU Electric Only		●	●	●
DMU Diesel Only		● ● ●	●	●
BMU Battery Only		●	● ●	● ●
HMU Hydrogen Fuel Cell Only	H <sub>2</sub>	●	● ● ●	● ● ●
DEMU Diesel-Electric Bi-Mode		● ●	● ●	●
DBMU Diesel-Battery Hybrid		● ●	● ● ●	● ● ●
BEMU Battery-Electric Hybrid		●	● ●	● ●
HEMU Hydrogen-Electric Hybrid	H <sub>2</sub>	●	● ● ●	● ● ●
BDEMU Battery-Diesel-Electric Tri-Mode		● ●	● ●	● ●

**Note:** This has changed from High to Medium complexity since the last update based on market intelligence work undertaken by EWR

# Case study: B-DEMU Hybrid – Class 168 HybridFLEX™

- Partnership between Chiltern, Porterbrook and Rolls-Royce to develop the Hybrid concept;
- One hybrid battery-diesel train currently in service;
- Fitted with brand new engines combined with on-board batteries;
- Batteries are used at stations with diesel used at other times and capture energy lost through braking;
- Fuel consumption and CO2 emissions are reduced by up to 25%, Nitrous Oxide (NOx) emissions by over 70% and particulate emissions by over 90%, compared to the original 25-year-old engine;
- Feasibility for future use on EWR under review.



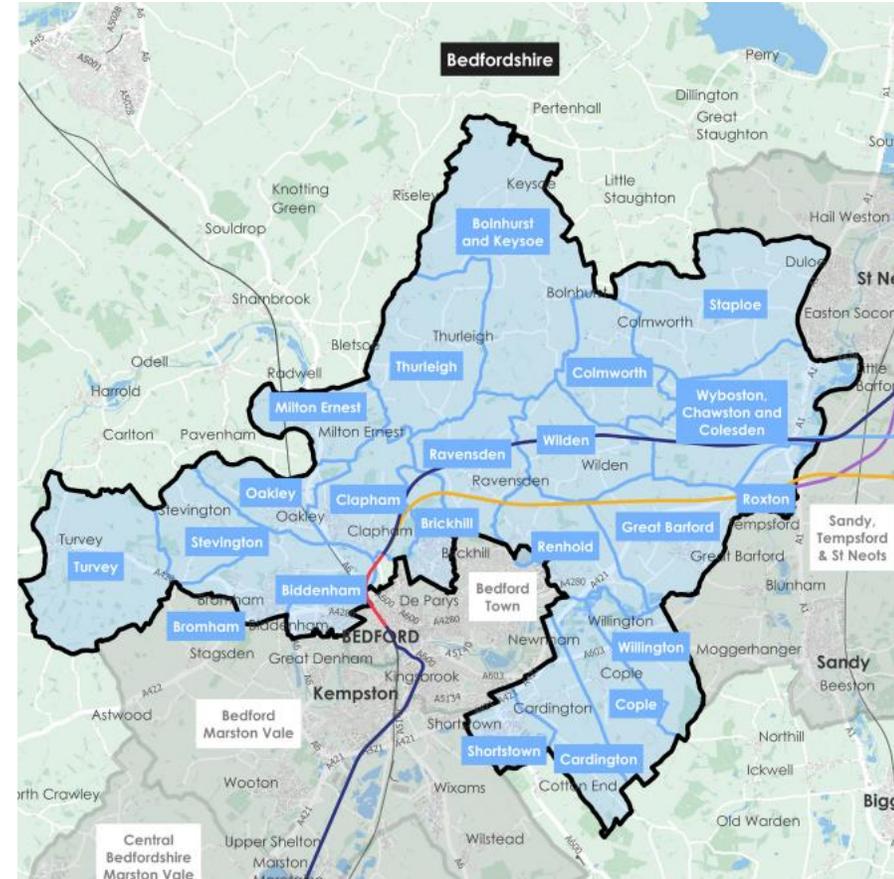
# Case study: Battery EMU Hybrid – Class 379 IPEMU

- Partnership between Network Rail, Bombardier, Abellio, Future Railway and Department for Transport (DfT) to demonstrate the viability of a battery-powered train;
- Tested in passenger service for five weeks in 2015;
- Electric train fitted with traction batteries on one vehicle;
- Batteries were used for a 30km section and charged from overhead line electrification on the remainder of the journey.



# Bedfordshire

- Diesel Fleet will operate when EWR Operation commences between Milton Keynes and Oxford;
- Diesel shuttle service between Bedford and Bletchley will continue to operate, run by London Northwestern Railway.
- Upgrade options for Marston Vale Line includes provision for electrification, but a decision on traction power has not yet been made.



# Ongoing Work



## Active engagement with Rolling Stock Manufactures, Owners and Train Operators...

to understand existing challenges with novel rolling stock traction types. Potential for EWR Co to lead innovation of future rolling stock to meet customer needs.



## Electrification is being taken into account...

with passive provision included in designs where appropriate.



## Continued engagement with the Department for Transport (DfT)...

to ensure EWR Co align with the decarbonisation agenda and 'The Williams-Shapps Plan for Rail'.

# Questions or comments

# 04. Freight

Andy Bagguley, Head of Systems- Rolling Stock

# Main types of rail freight

‘Rail freight’ represents different types of freight flows with different requirements to consider in design, mainly:

- **Intermodal (containerised) traffic**
  - ✓ to and from ports and between distribution hubs
  - ✓ from perishable food items to clothing, cars and toilet paper, carried in containers
- **Bulk freight**
  - ✓ construction and aggregates materials such as sand, stone and waste, & key flows supporting building and construction sites
  - ✓ carried in open or closed wagons

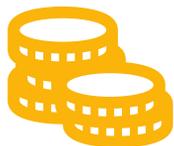
Rail freight operates in response to demand, based on open access agreements and commercial contracts, and needs to be agile and flexible to respond to the market.



# National Value of Rail Freight



- **Goods worth £30bn** are transported to customers every year
- **£2.45bn estimated benefits to the UK annually**
  - £1.65bn user benefits, including cost and time savings and reliability improvements
  - £0.80bn benefits to the wider society, such as through modal shift, including congestion relief, noise and reduced safety incidences



- **Productivity gains and rebalancing the economy**, with more than 60% of its activity focused on former industrial centres in Yorkshire, the North West, Scotland and the Midlands



- Significant actor in the drive for **decarbonisation nationally**:
  - lower output from a fuel intensity and harmful emissions perspective compared to other modes, particularly road haulage - 76% fewer carbon emissions per tonne kilometre transported compared to road
  - 1 bulk train = up to 76 Heavy Goods Vehicles (HGVs), 1 container train = up to 34 HGVs
  - reduces the social cost of greenhouse gas emissions by 86% and improves air quality costs by 16% per avoided lorry km

# Rail Freight is growing and forecast to double in 20 years

Volumes are forecast to grow significantly by 2043/44 - domestic & ports intermodal are forecast to grow the most

## Ports Intermodal

- From continuous growth in demand through ports (more trade/more trade in containers) plus growth in rail freight interchanges

## Domestic Intermodal

- Growth driven largely by the growth in rail freight interchanges

## Construction Materials

- Growth based partly on growing demand but also on improvements in rail productivity such as longer trains



[Portoffelixstowe.co.uk](http://Portoffelixstowe.co.uk)



# Rail Freight potential for EWR

- We are designing the railway to accommodate freight
- We are exploring the opportunities for freight created by EWR
- Our objective is to maintain current capacity for rail freight and make appropriate provision to enable future growth
- What this means in practice is still under review, and will depend on factors such as government policy, demand, impact & investment choices



# Working out the right approach to freight is not straightforward

*Freight considerations are not the same across the route – different potentials for different flows on different sections*

## **Ongoing work to consider:**

- EWR's strategic fit into the national rail network and the role it can play
- The levels of potential freight demand, benefits & growth
- Additional investment that may be required to support different levels of freight
- Local community considerations and feedback from our consultation
- Green agenda, decarbonisation, rail transport and other policies
- and more...!

# Questions or comments

# 05. Future topics

# Topics for future discussion

Meeting #9 onwards – Approach to developing a construction management plan and examples of mitigation measures

---

Discussion: Other topics for future meetings

---

Suggested frequency: Every 6 weeks

---

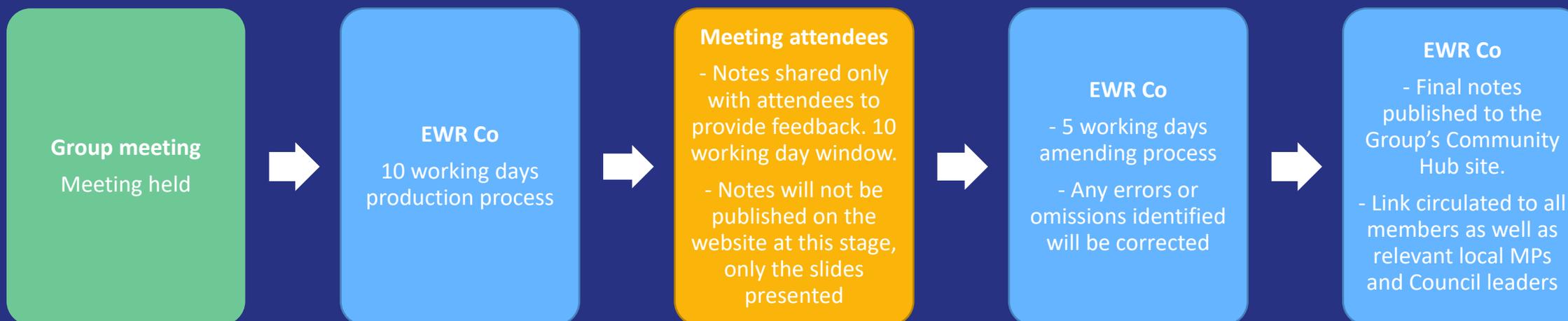
Outcomes:

Actions:

---

# 06. AOB and closing remarks

# Creating meeting notes



# We're always here

All the Group's relevant documents will be available on its **Community Hub** site.

We will notify you when available.



# Got a question?

If you have any questions about the Group, please email:

[localrepresentativesgroups@eastwestrail.co.uk](mailto:localrepresentativesgroups@eastwestrail.co.uk)

If you have any questions about the project, please email:

[contact@eastwestrail.co.uk](mailto:contact@eastwestrail.co.uk)

Or you can also call us on **0330 134 0067**

**east**  
**west**  
**RAIL**

**[eastwestrail.co.uk](http://eastwestrail.co.uk)**